Author Index

Abdelbarr, F. N., 119
Aggarwal, R. P., 153

Barrios, Jr., L., 21
Benner, C., 49
Bishop, R. R., 29

Carswell, P., 49
Chen, C. S., 171
Conrad, L. E., 35
Council, M. E., 13, 21

Duran, E. G., 189

El-Amin, I. M., 219
El-Sadek, M. Z., 119
Ell, L. K., 13

Girgis, A. A., 89, 199
Grigg, C. H., 35

Harley, R. G., 189
Hartana, R. K., 57
Huang, M., 229

Imam, M. H., 101

Kiernicki, J., 149, 239
Kinsner, K., 149, 239
Kojima, Y., 65
Kornas, T., 149, 239

Little, K. W., 35

McAfee, R. D., 29
Machias, A. V., 209
Mahmoud, A. A., 29, 41
Makram, E. B., 89, 189, 199
Mankoff, L. L., 77
Michael, G. L., 159
Mir, M., 101
Moo, C. S., 171
Mori, H., 65
Mushtaq Hussain, M., 219

Naik, K. B., 139

Osborn, D. L., 5

Palanichamy, C., 129
Pan, Y., 153
Pandey, S. D., 139
Popović, D. P., 179

Richards, G. G., 57
Rockefeller, G. D., 77
Russell, B. D., 49

Sakurai, T., 65
Satoh, N., 65
Soundararajan, K., 109
Srikrishna, K., 129

Tang, Y., 41
Thompson, R. L., 199
Tsuzuki, S., 65

Verma, H. K., 109

Wang, L., 229
Wang., S., 229
Wu, J. S., 171

Xiang, N., 229

Yen, I. H., 171

© Elsevier Sequoia/Printed in The Netherlands

Subject Index

Arcing faults
improved algorithm for detecting, using random fault behaviour, 49

Biological effects
on swine and primates due to power frequency and radio frequency radiation, 29

Chopper fed DC series motor
during steady-state and dynamic operating conditions, analysis and performance of, 139
Compensators
comparing capacitive and LC, for power factor correction and voltage harmonic reduction, 57
Control
and protection, hierarchical integrated, EPRI R & D programs with digital systems for, 77

Digital differential relaying
for generator protection: development of algorithm and off-line evaluation, 109
Direct current series motor
chopper fed, analysis and performance of, during steady-state and dynamic operating conditions, 139
Distance relays
mathematical technique for optimum reach setting of, considering system uncertainties, 101
Distortion factor
and voltage harmonics in electric power systems, relationship between, 65
Distribution systems
harmonic analysis of, 171
unbalanced, with harmonic distortion, fault-induced transient analysis of, 89
Distribution transformers
excitation harmonics of, 13
15, 25 and 50 kVA pole and pad mounted, technique for establishing winter loading guidelines for, based on direct measurement of winding and oil temperatures, 21

Faults
arcing, improved algorithm for detecting, using random fault behaviour, 49

Generation redispatch
short-term, method for, 139
Generator protection
development of algorithm and off-line evaluation of digital differential relaying for, 109

Harmonic analysis
of distribution systems, 171
Harmonic distortion
effects of transformer models on voltage variation of unbalanced distribution system in presence of, 199
fault-induced transient analysis of unbalanced distribution systems, 89
in power systems, evaluation and reduction of, 41
Harmonics
excitation, of distribution transformers, 13
voltage, comparing capacitive and LC compensators for reduction of, 57
voltage, and distortion factor in electric power systems, relationship between, 65

Induction motor load
effects of, in provoking transient voltage instabilities in power systems, 119
Induction motors
connected to unbalanced networks, starting transients of, 189
Instabilities
transient voltage, in power systems, effects of induction motor load in provoking, 119

Loading guidelines
winter, for 15, 25 and 50 kVA pole and pad mounted distribution transformers, technique for establishing, based on direct measurement of winding and oil temperatures, 21

Motor drives
voltage sensitive variable speed AC, impact of radial versus meshed subtransmission configurations on, 35

Optimal power flow
parallel reduced gradient solution of, 229
Optimum reach setting
of distance relays, mathematical technique for, considering system uncertainties, 101

Pattern recognition approach
transient stability evaluation by, using multivalent logics, 209
Power consumption
reactive, influence of voltage variations on, 149
Power factors
comparing capacitive and LC compensators for correction of, 57
Power frequency radiation
biological effects on swine and primates due to, 29
Power losses
real, minimization of, using reactive power control, 153
Power system(s)
efficient unified methodology for steady-state and dynamic security assessment of, 179
evaluation and reduction of harmonic distortion in, 41
of North Sea platform, 159

© Elsevier Sequoia/Printed in The Netherlands

Probabilistic method
to determine active power voltage control coefficients, application of, 239
Protection
and control, hierarchical integrated, EPRI R & D programs with digital systems for, 77
of generators, development of algorithm and off-line evaluation of digital differential relaying for, 109

Radio frequency radiation
biological effects on swine and primates due to, 29

Security assessment
steady-state and dynamic, of power systems, efficient unified methodology for, 179
Starting transients
of induction motors connected to unbalanced networks, 189
Static VAR system
factors for planning, 5
Subtransmission configurations
impact of radial versus meshed, on voltage sensitive variable speed AC motor drives, 35
Superconducting coil
application of, for transient stability enhancement, 219

Transformer models
effects of, on voltage variation of unbalanced distribution system in presence of harmonic distortion, 199
Transformers
distribution, excitation harmonics of, 13
15, 25 and 50 kVA pole and pad mounted distribution, technique for establishing winter loading guidelines for, based on direct measurement of winding and oil temperatures, 21
Transient analysis
fault-induced, of unbalanced distribution systems with harmonic distortion, 89
Transient stability
application of superconducting coil for enhancement of, 219
evaluation of, by pattern recognition approach using multivalent logics, 209

Unbalanced distribution system(s)
effects of transformer models on voltage variation of, in presence of harmonic distortion, 199
with harmonic distortion, fault-induced transient analysis of, 89
Unbalanced networks
starting transients of induction motors connected to, 189

Voltage control coefficients
of active power, application of probabilistic method to determine, 239
Voltage harmonics
comparing capacitive and LC compensators for reduction of, 57
and distortion factors in electric power systems, relationship between, 65
Voltage instabilities
transient, in power systems, effects of induction motor load in provoking, 119
Voltage sensitive motor drives
variable speed AC, impact of radial versus meshed subtransmission configurations on, 35
Voltage variations
influence of, on reactive power consumption, 149